

REMARKS

Entry of the above amendments and reconsideration of this application as amended are requested. Upon entry of the amendments, this application will contain claims 43-47, 49, 52-56, 58-60, 62-64, 68 and 73-74 pending and under consideration. The amendments and following remarks are believed to address and remove all rejections of record. Therefore, allowance of this application is solicited.

Claims 43, 45-47, 52, 60, 68 and 73-74 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al. (U.S. 4,888,366), as evidenced by McKay, W. (U.S. 5,972,368). This rejection is respectfully traversed.

Independent claims 43, 60, 73 and 74 have been amended to require that the device or matrix "exhibits sufficient flexibility to be rolled up on itself when hydrated". Support for this amendment is found at page 12, lines 26-28, and the amendment introduces no new subject matter to the application. There is no teaching in Chu et al., McKay, or their combination, that renders the claimed subject matters obvious without the impermissible use of hindsight.

Clearly, the claims now require a highly flexible spongy material – one that can be rolled up when in hydrated condition. To the contrary, Chu et al. expressly teach the preparation of a rigid material and against a highly flexible spongy material. For example, at column 2, lines 36+, Chu et al. describes how its compositions are prepared (including drying at ambient pressures and slightly elevated temperatures), concluding at lines 47-51 that "[w]hen the preparation

process is conducted this way, the resulting compositions are characterized as being rigid with a compression strength of at least 20 Newtons per square centimeter...". Further, at column 9, lines 24-26, Chu et al. teaches that "[d]rying by lyophilization at the final step produces a spongy product that is nonconforming as to strength and homogeneity." Thus, Chu et al. teaches against the claimed invention.

In attempting to interpret the Chu et al. reference as motivating the preparation of a flexible material, the Office Action points to Example 5 of Chu et al. for a teaching "a composition that is molded into a desirable dimension prior to implantation". However, this portion of Example 5 refers to the comparative material prepared by lyophilization in Example 2, which Chu et al. teaches is expressly not its invention. In other words, Chu et al. includes this information as an example of something NOT to do. It is thus improper to use this information to find that Chu et al. would lead one skilled in the art to practice the invention presently claimed. Further, McKay adds no teachings that fill the shortcomings of Chu et al. noted above.

The present invention provides an osteogenic implant material that is very highly composed of mineral, yet is also very flexible. Such a material provides a long-lasting scaffold at the implant site even in the presence of osteoclasts stimulated by the osteogenic factor, yet at the same time the implant material is workable in use to fill varied implant sites. Neither reference, nor their combination, renders the claimed invention obvious.

In view of the foregoing, reconsideration and withdrawal of the rejection over Chu et al. (U.S. 4,888,366), as evidenced by McKay, W. (U.S. 5,972,368) is solicited.

Claims 43-44 and 56-59 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al. (U.S. 4,888,366), as applied to claim 43; in view of Geistlich et al. (U.S. 5,573,771). To the extent maintained, this rejection is traversed.

As noted above, independent claim 43 has been amended to require that the device exhibits "sufficient flexibility to be rolled up on itself when hydrated", and the Chu et al. reference does not teach such a material, but rather teaches against it. Geistlich et al. was not relied upon to fill these shortcomings, nor could it be. Accordingly, withdrawal of this rejection is also solicited.

Claims 43, 52-55, 60 and 62-64 and 56-59 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al. as applied to claims 43 and 52; in view of McKay, W. To the extent maintained, this rejection is respectfully traversed.

As noted above, independent claims 43 and 60 have been amended to require that the device exhibits "sufficient flexibility to be rolled up on itself when hydrated", and the Chu et al. reference does not teach such a material, but rather teaches against it. McKay was not relied upon to fill these shortcomings, nor could it be. Accordingly, withdrawal of this rejection is also solicited.

Claims 43 and 49 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chu et al., as applied to claim 43; in view of Michelson (U.S. 5,785,710). To the extent maintained, this rejection is respectfully traversed.

As noted above, independent claim 43 has been amended to require that the device exhibits "sufficient flexibility to be rolled up on itself when hydrated", and the Chu et al. reference does not teach such a material, but rather teaches against it. Michelson was not relied upon to fill these shortcomings, nor could it be. Accordingly, withdrawal of this rejection is also solicited.

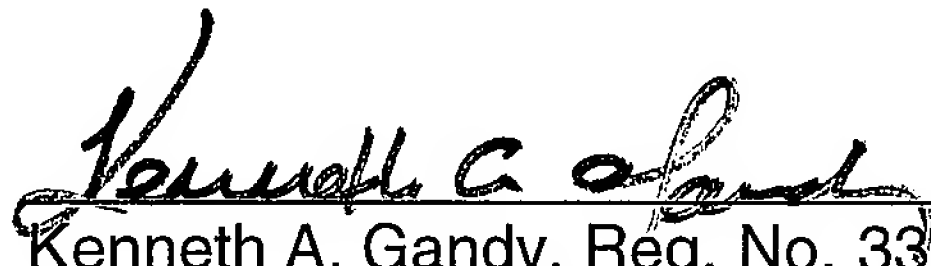
Conclusion

In view of the foregoing amendments and remarks, reconsideration and allowance of this application are requested.

Request for Interview

In the event that the Examiner finds any reason that the application cannot be allowed in its present form, the Applicant wishes to conduct an interview with the Examiner prior to any next Office Action in order to provide an opportunity for coming to agreement upon allowable claims. To arrange the interview, the Examiner should call the undersigned attorney at the telephone number given.

Respectfully submitted,


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